

ABSTRACT OF THE DISCLOSURE

A procedure which comprises a second step of pressing of the *Salvia Hispanica* L. seeds with temperature control modifying the ratio between the polyunsaturated fatty acids and antioxidants contained as well as obtaining an expeller.

The procedure comprises a third step in which the expeller obtained is let to cool until it reaches room temperature and a fourth step in which the expeller, at room temperature, is entered into a disc-driven mill to obtain different particle sizes of a partially low-fat flour with a high content of polyunsaturated fatty acids, especially Ω_3 type.